IN THE CLAIMS

Cancel Claims 8-10 and 16, without prejudice.

1. (Currently Amended) A system for monitoring a gas/oil well, comprising:

a monitoring unit at a well head, the monitoring unit including a wireless monitor transceiver ~~wireless transmitter~~ consuming power at a safe level for avoiding an explosion risk and further including a gas tight box for housing sensor processing electronics;

a relay unit including a wireless relay transceiver ~~a wireless receiver~~ communicating with the wireless monitor transceiver of the monitoring unit ~~transmitter~~ and further including a telephone communication link; and

a host interface communicating with the relay unit through the telephone communication link.

2. (Original) The system of Claim 1, wherein the monitoring unit senses a condition of the gas/oil well.

3. (Original) The system of Claim 2, wherein the monitoring unit senses pressure level.

4. (Original) The system of Claim 2, wherein the monitoring unit senses temperature.

5. (Original) The system of Claim 2, wherein the monitoring unit senses the presence or absence of flame.

6. (Currently Amended) The system of Claim 1, wherein the wireless transmitter ~~consumes~~ radiates less than about 0.75 mW of power.

7. (Original) The system of Claim 1, wherein the telephone communication link comprises a cellular connection.

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Currently Amended) A system for monitoring a gas/oil well, comprising:

a monitoring unit located within a danger zone, the monitoring unit including a bi-directional wireless monitor transceiver and sensor processing electronics, the sensor processing electronics housed in a gas tight box;

a relay unit located outside the danger zone and including a wireless relay transceiver communicating with the bi-directional monitor transceiver, said bi-directional monitor transceiver transmitting communications to and receiving communications from said relay transceiver; and

a host interface communicating with said relay unit, said relay unit adapted to interrogate said monitoring unit for sensor data from said sensor processing electronics and to transmit said sensor data to said host interface.

12. (Currently Amended) The system of Claim 11, wherein the sensor processing electronics of said monitoring unit processes said sensor data ~~and incoming communications from the relay unit~~ to be transmitted to said relay unit after said relay unit communicates with said bi-directional monitor transceiver to interrogate said monitoring unit.

13. (Original) The system of Claim 12, wherein the sensor data includes pressure data.

14. (Original) The system of Claim 12, wherein the sensor data includes temperature data.

15. (Original) The system of Claim 12, wherein the sensor data includes information on the presence of a flame.

16. (Cancelled)

17. (Currently Amended) The system of Claim 11, wherein the relay unit communicates via a LAN line with ~~a~~ said host interface.

18. (Currently Amended) An apparatus for monitoring a gas/oil well, comprising:

a gas tight and explosion proof housing, the gas tight and explosion proof housing containing sensor processing electronics; ~~and~~

an RF transceiver, the RF transceiver located ~~outside the gas tight~~ inside the gas tight and explosion proof housing ~~and~~ in electrical communication with the sensor processing electronics,

~~inside the gas tight housing~~ said RF transceiver electrically connected to an antenna located outside the housing; and

a relay unit spaced from the housing and adapted to interrogate said sensor processing electronics for data via said antenna.

19. (Original) The apparatus of Claimi 18, wherein a transmitter of the RF transceiver uses less than or equal to about 0.75 mW of power.

20. (Currently Amended) A method for monitoring a gas/oil well, comprising:

sensing a condition of the gas/oil well at ~~the~~ a gas/oil well site by a monitoring unit;

waking up a CPU in the monitoring unit;

interrogating the monitoring unit for the sensed condition; and

transmitting the sensed condition from said monitoring unit at the gas/oil well site to a relay unit over a wireless link in response to an interrogation sent to said monitoring unit by said relay unit.

21. (Original) The method of Claim 20, wherein the transmitting over a wireless link is accomplished by an RF transmitter.

22. (Original) The method of Claim 20, wherein the CPU is located inside a gas tight box.

23. (Currently Amended) The method of Claim 21, wherein the RF transceiver is located ~~outside~~ inside a gas tight box, wherein the gas tight box houses the CPU.

24. (Original) A method of communicating to and from an explosive environment, comprising:

situating a first transceiver in said explosive environment, said transceiver operating at a power level which is below the level defined as dangerous within said explosive environment;

situating a second transceiver proximate to but outside of said explosive environment, said second transceiver operating at a power level which is above the level defined as dnagerous within said explosive environment; and

communicating with said first transceiver through said second transceiver from a location outside of said explosive environment and not proximate to said explosive environment.

25. (Original) Apparatus for communicating to and from an explosive environment, comprising:

a first transceiver in said explosive environment, said transceiver operating at a power level which is below the level defined as dangerous within said explosive environment;

a second transceiver proximate to but outside of said explosive environment, said second transceiver operating at a power level which is above the level defined as dangerous within said explosive environment; and

a third transceiver outside of said explosive environment and not proximate to said explosive environment which is configured to communicate with said first transceiver through said second transceiver.

26. (Currently Amended) A method of communicating to and from an explosive environment, comprising:

situating a first transceiver in said explosive environment, said first transceiver having a ~~short,~~ first range and operating at a ~~low,~~ first power level;

situating a second transceiver outside said explosive environment but within said ~~short,~~ first range, said second transceiver having a longer, second range and operating at a higher, second power level;

situating a third transceiver outside said explosive environment, outside said ~~short,~~ first range, but within said second, longer range; and

communicating between said first and third transceivers through said second transceiver.

27. (Currently Amended) Apparatus for communicating to and from an explosive environment, comprising:

a first transceiver positioned in said explosive environment, said first transceiver having a ~~short,~~ first range and operating at a ~~low,~~ first power level;

a second transceiver positioned outside said explosive environment but within said ~~short,~~ first range, said second transceiver having a longer, second range and operating at a higher, second power level; and

a third transceiver positioned outside said explosive environment, outside said ~~short,~~ first range, but within said second, longer range, said third transceiver configured to communicate with said first transceiver through said second transceiver.